## SECTION I: NON-CONFIDENTIAL PROJECT INFORMATION

Host Country:	Israel
Name of Borrower(s):	Negev Energy – Ashalim Thermo-Solar Ltd.
Project Description:	The Ashalim Thermo Solar Power Plant comprises the design,
Troject Description.	construction, operation, maintenance and financing of a
	concentrated solar power ("CSP") plant with a net capacity of
	110 megawatt ("MW") in the Negev Desert in Israel, (the
	"Project"). Negev Energy-Ashalim Thermo-Solar Ltd. ("Negev
	Energy"), a limited liability company incorporated under the
	laws of Israel, has entered into a Build-Operate-Transfer
	("BOT") Concession with the State of Israel for a 25-year
	operation period, and a 25-year power purchase agreement
	("PPA") with the Israel Electric Corporation ("IEC"), the state-
	owned electricity utility. IEC will purchase 100% of the
	electricity generated by the new power plant under PPA, which
	is guaranteed by the government of Israel ("GOI").
Proposed OPIC Loan:	\$250 million
Total Project Costs:	\$1.1 billion
U.S. Sponsor:	Abengoa Solar LLC
Foreign Sponsor:	Shikun & Binui Renewable Energy Ltd.
Policy Review	
U.S. Economic Impact:	The Project is not expected to have a negative impact on the
	U.S. economy. Initial and operational U.S. procurement
	associated with this Project is expected to have a positive
	impact on U.S. employment. The Project is expected to have a
	negative five-year U.S. balance of payments impact.
Developmental Effects:	The U.S.'s commitment to Israel's security has been a
	cornerstone of U.S. foreign policy in the Middle East since
	Israel's creation in 1948. Throughout the years the U.S. and
	Israel have had a deep and enduring partnership in the
	economic/security realm. This Project helps to promote
	political and economic stability in Israel and the region by
	strengthening Israel's energy independence using renewable
	energy, which supports U.S. climate change goals as well as
	encouraging constructive relations and economic inclusiveness
	between Israeli and Arab communities. The Project's attributes
	serve as an exemplary prototype for similar economic
	development and renewable energy projects that could be developed for greater energy (including renewable energy)
	cooperation in the region. Specifically, this project will have a
	strong developmental impact on Israel through its support of the
	GOI's 10-year strategic initiative to attract investment and
	infrastructure to the underserved communities in the Negev, as
	a national priority region. The Project will address Israel's need
	for energy through a clean, renewable source and thus help
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reduce its reliance on coal-fired generation. CSP plants burn much less fuel than conventional power plants and do not require additional spinning reserve to address intermittency issues associated with photovoltaic power plants, providing more environmentally benign energy to consumers. The Project will create employment during construction and operations in the Negev desert region, a relatively poor area of Israel with Arab-Israeli and Bedouin populations having limited employment opportunities and underdeveloped infrastructure. Further, the Project will bring advanced solar generation, operation technologies and management practices to Israel. Dozens of new technical jobs will be created by the new solar plant, which will involve extensive training in plant operation, management and maintenance. Further, the Project will bring advanced solar generation and operational technologies, such as concentrated solar power technology with thermal energy storage, to Israel. Finally, the Project will contribute to the Israeli government's goal of achieving energy independence by reducing its dependence on energy imports.

**Environment:** 

Screening: The Project has been reviewed against OPIC's categorical prohibitions and determined to be categorically eligible. The Project is screened as Category B because its impacts are site specific and readily mitigated. The primary environmental and social issues associated with CSP plants are land use impacts including the potential disturbance of sensitive ecological species through habitat alteration, impacts from water requirements necessary for the plant cooling system, the necessity to implement occupational health and safety procedures to protect workers during construction and operation, and air quality impacts for facilities using fossil fuels for backup.

**Applicable Standards:** OPIC's environmental and social due diligence indicates that the Project will have impacts that must be managed in a manner consistent with the following Performance Standards:

PS1: Social and Environmental Assessment and Management Systems.

PS2: Labor and Working Conditions.

PS3: Pollution Prevention and Abatement.

PS4: Community Health, Safety and Security

PS6: Biodiversity Conservation and Sustainable Natural

Resource Management

PS8: Cultural Heritage.

The Project site is uninhabited and owned by the Israeli government; therefore, no new land acquisition or resettlement is required for the Project. Based on available information, there are no communities in the area immediately surrounding the proposed Project areas which would be considered indigenous under PS 7 (Indigenous Peoples). Therefore, P.S.'s 5 and 7 are not triggered at this time.

Consistent with the requirements of PS 3 (Pollution Prevention and Abatement) the project is required to meet applicable provisions of the 2007 IFC General Environmental Health and Safety Guidelines and the 2008 IFC Environmental, Health and Safety Guidelines for Thermal Power Plants.

Environmental and Social Risks: The Project will be one of three solar power generation facilities to be constructed near the village of Ashalim in the Negev Desert in order to help Israel meet its goal of generating 10% of its energy from renewable resources. The site, which was selected by the Israeli government, is uninhabited, unused and sparsely vegetated. There are no flora or fauna of ecological significance that will be impacted by the Project. Water will be provided by Mekorot, the Israeli National Water Company, and will be delivered to the site by a 30 km pipeline which will be constructed along a utility corridor adjacent to a major road. To evacuate the power, a 161 kV transmission line will be constructed by Israeli Electric Company. The transmission line will also run along the road for 11 km to a substation in Mashabei Sadeh.

The concentrated solar facility will use natural gas as a backup fuel. A natural gas pipeline will be constructed along the road by Negev Gas Company to supply the facility. The use of natural gas is limited to 15% of the annual power generation and air quality impacts from the combustion of natural gas are minimal. The major air quality impacts of the Project are related to dust emissions during the construction phase. Mitigation measures to control dust will be included in a Social and Environmental Management Plan.

Sewage will be sent to a municipal sewage treatment plant and solid wastes to a certified landfill. Process wastewater will be kept on site in an evaporation pond and not discharged. Noise emissions have been modeled and meet regulatory limits. The technology requires use of heat transfer fluid which is hazardous, but the Project sponsors have experience in handling the fluid and will provide detailed plans for its safe handling

and disposal. The facility also includes a thermal storage using molten salts. Plans will be developed for safe salt disposal. The site was adjacent to an active military training area and has the potential to contain unexploded ordnances. The Project will hire a trained consultant to remove the munitions. Archaeological finds have been identified on the site and will be removed in close coordination with the Israeli Antiquity Authority.

Greenhouse gas emissions from the combustion of natural gas have been estimated at approximately 60,000 tons/year.  $CO_2$  emissions avoided as a result of the Project (taking into account emissions from use of the gas-fired unit) are estimated at 258,000 tons/year.

**Risk Mitigation:** The Project developers have well developed corporate social responsibility programs, but an Environmental and Social Management System specific to this Project has not yet been developed. It will be required prior to disbursement and will include the Project's environmental policy, identification of the Project's risks and impacts, a description of the organizational capacity and competency at the facility to carry out the social and environmental obligations required by OPIC, emergency preparedness and response, a well-developed stakeholder engagement plan and procedures for monitoring the Project. Additionally, the Project is still in the process of developing detailed plans for managing air, noise, soil and water contamination, electromagnetic effects, sewage, fire safety and tree replanting. OPIC will review these plans as they are developed and ensure that all mitigation measures are included in the Project's Social and Environmental Management Plan.

**OPIC Site Visit:** OPIC staff undertook an environmental and social due diligence site visit on January 15 and 16, 2014. During the site visit meetings were held with the Ramat Hanegev Regional Council and the nearby Bedouin village of Bir Hadaj.

Workers Rights:

OPIC's statutorily required standard worker rights language will be supplemented with provisions concerning the right of association, organization and collective bargaining, the withholding of passports, minimum age for employment, hours of work, the timely payment of wages and hazardous work situations. Standard and supplemental contract language will be applied to all workers of the Project. The Project will be required to operate in a manner consistent with the requirements

of the International Finance Corporation's Performance Standard 2 on Labor and Working Conditions. In accordance with OPIC's Environmental and Social Policy Statement, this Project has not been classified as Special Consideration based on an assessment of the likelihood, severity, and degree of possible labor rights violations and their relevance to the Project. The Project's labor risk primarily centers on the construction workforce which is largely technical, comprised of only 190 unskilled laborers at peak construction. This risk is mitigated by the following factors: 1) Abengoa and S&B are globally recognized constructors and operators in solar energy with experience in operating according to international standards; 2) the Project will be implemented in accordance with Israeli labor laws which are robust with a strong supporting regulatory framework; 3) the Project will be monitored by OPIC and a third-party consultant for performance against international labor standards, including IFC Performance Standard 2; 4) the construction, and operations and maintenance workforce consists primarily of less vulnerable worker populations, including highly-skilled, technical employees; and 5) once in the operations and maintenance phase, the power plant utilizes a relatively small staff of an estimated 64 managerial and technical employees. **Human Rights:** OPIC issued a human rights clearance for the Project on February 5, 2013.